

TA-F650ESD

SERVICE MANUAL

Canadian Model
AEP Model
UK Model



SPECIFICATIONS

Amplifier section

Item	Condition		Data
Continuous RMS power output (both channels driven simultaneously)	4 ohms, 20 Hz-20 kHz THD 0.008%	EXCEPT AEP model	120 W + 120 W (THD 0.01%) (DIN: 175 W + 175 W)
	6 ohms, 20 Hz-20 kHz THD 0.006%	EXCEPT AEP model	100 W + 100 W (DIN: 140 W + 140 W)
		AEP model	95 W + 95 W (DIN: 120 W + 120 W)
	8 ohms, 20 Hz-20 kHz THD 0.004%	EXCEPT AEP model	90 W + 90 W (DIN: 115 W + 115 W)
		AEP model	80 W + 80 W (DIN: 100 W + 100 W)
Power band width (IHF)	8 ohms, THD 0.02%		10 Hz - 100 kHz at 45 W
Dynamic headroom ('78 IHF)	4 ohms		2 dB
	8 ohms		1.2 dB
Total harmonic distortion	8 ohms, at 10 watt output		0.003%
Intermodulation (IM) distortion 60 Hz: 7 kHz = 4:1	4 ohm, at rated output		0.008%
	6 ohms at rated output		0.006%
	8 ohms at rated output		0.004%
Damping factor	8 ohms, 1 kHz		100
Residual noise	network A		less than 90 µV
Frequency response	PHONO MM		RIAA equalization curve ±0.2 dB
	TUNER, CD, TAPE 1, 2, 3, DIRECT IN		2 Hz - 200 kHz +0 -3 dB
Input sensitivity	PHONO	MC	0.17 mV, 100 ohms.
		MM	2.5 mV, 50 kohms
	TUNER, CD, DIRECT IN, TAPE 1, 2, 3 ADAPTOR IN		150 mV, 20 kohms

— Continued on page 2 —

INTEGRATED STEREO AMPLIFIER
SONY®

Item	Condition		Data
S/N (network)	PHONO	MC	77 (0.5mV)
		MM	95 (5.0mV)
	TUNER, CD, DIRECT IN, TAPE 1, 2, 3 ADAPTOR IN		108 (150mV)
Output voltage impedance	REC OUT 1, 2, 3 ADAPTOR OUT		150 mV, 1 kohm
	HEADPHONES		25 miliwatts (at 8 ohms) Accepts low and high impedance headphones.
Tone controls	BASS, at 100 Hz		±6.5 dB (turnover freq. 400 Hz)
	TREBLE, at 10 kHz		±6 dB (freq. 5 kHz)
SUBSONIC filter	—		6 dB/octave attenuation below 15Hz

DA converter section

Item	Condition	Data
Input sensitivity	DIGITAL COAXIAL IN	0.5 Vp-p, ±20%, 75 ohms
	DIGITAL OPTICAL IN 1, 2	TOSLINK
Output voltage impedance	DIGITAL OPTICAL 2 REC OUT	TOSLINK
Output voltage	DA converter	2 V

General

System Preamplifier section: Low-noise high gain NFB type equalizer amplifier, passive type direct tone control
Power amplifier section: Pure-complementary SEPP power amplifier

Power requirements

Canadian model : 120V AC, 50Hz
AEP, West Germany model : 220V AC, 50Hz
UK model: 240 V AC, 50 Hz

AC outlet

Canadian model	2 switched, 1 unswitched, 100 watts max. each
AEP, UK, West Germany model	—

Dimensions

Approx. 430 x.150 x 390 mm (w/h/d)
(18½ x 5⅞ x 15⅝ inches)

Weight

Approx. 11.8 kg (26 lbs 1 oz) net

Design and specifications subject to change without notice.

Note

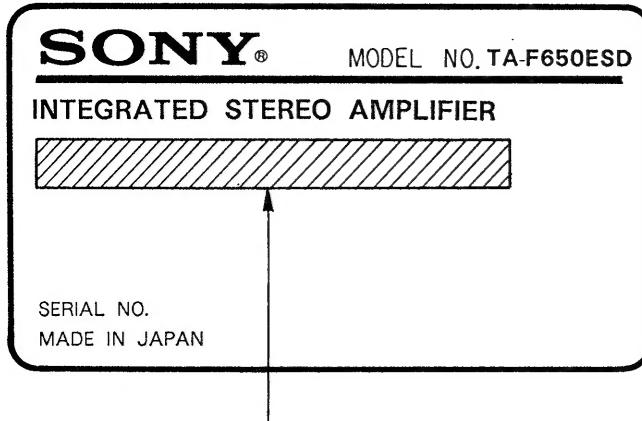
This appliance conforms with EEC directive 87/308/EEC regarding interference suppression.

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MODEL IDENTIFICATION

— Specification Label —



AEP, West Germany Model : AC : 220V~50/60Hz
 UK Model : AC : 240V~50/60Hz
 Canadian Model : AC : 120V 60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamper). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

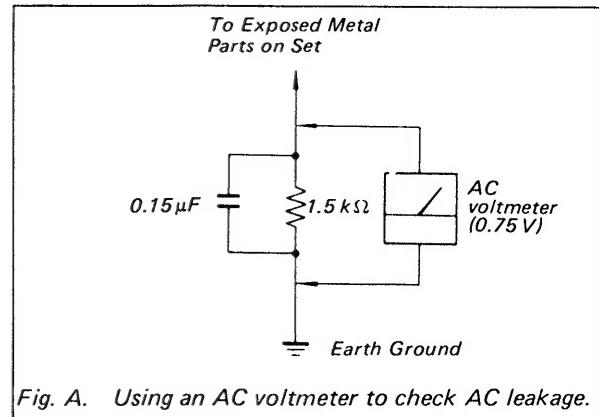
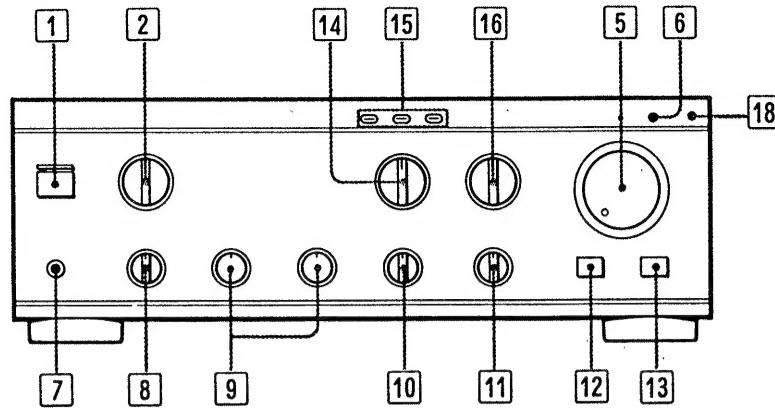


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1 GENERAL

1-1. PARTS IDENTIFICATION

This section is extracted from instruction manual.



[1] POWER switch and power/standby indicator

Immediately after turning ON the power, the standby indicator lights in red as the built-in muting circuit activates.

When the amplifier stays in a stable operating condition, the indicator lights in green.

The indicator lights in red when the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components.

In such a case, disconnect the power source and check the connected components and speaker systems.

[2] SPEAKERS selector

Select speaker system A or B, or both.

For headphone monitoring only, set the selector to OFF.

[5] ATTENUATOR knob

Regulates the sound level.

[6] MUTING switch and indicator

Generally, keep the switch released (OFF).

Depress the switch to reduce the sound level by 20 dB.
(Output voltage becomes 1/10.)

[7] HEADPHONES jack (stereo phone jack)

[8] MODE selector

STEREO: For listening to a stereo program.
MONO: For listening to a monaural program.

[9] BASS and TREBLE controls

[10] REC OUT SELECTOR

Selects the program source sent to the REC OUT jacks (rear panel).

When set to DIGITAL, the selection is made with the DIGITAL INPUT SELECTOR.

[11] BALANCE control

Controls the sound level of left and right speakers.

[12] SOURCE DIRECT switch and indicator

Depress the switch. The red indicator lights and the circuits of the tone control, subsonic filter switch, balance control and mode switch are disengaged without regard to the setting of the switches.

[13] CARTRIDGE selector

Set the selector according to your cartridge.

MM: For moving-magnet type cartridge

MC: For moving-coil type cartridge

[14] DIGITAL INPUT SELECTOR

Selects the desired digital program source. When set to ANALOG, selection is made with the ANALOG INPUT SELECTOR.

[15] SAMPLING FREQ (frequency) indicator

When a digital signal is being input correctly, the sampling frequency of the signal is displayed (44.1 kHz is displayed when CD player is being played).

The indicator lights in a second after the DIGITAL INPUT is selected and the program source starts at the same time.

[16] ANALOG INPUT SELECTOR

Selects the desired analog program source. The selection is made only when the DIGITAL INPUT SELECTOR is set to ANALOG.

[18] SUBSONIC filter switch

Depress the switch to reduce unwanted noise components of less than 15 Hz, which cause modulation noise.

SECTION 2 ADJUSTMENTS

PRECAUTIONS

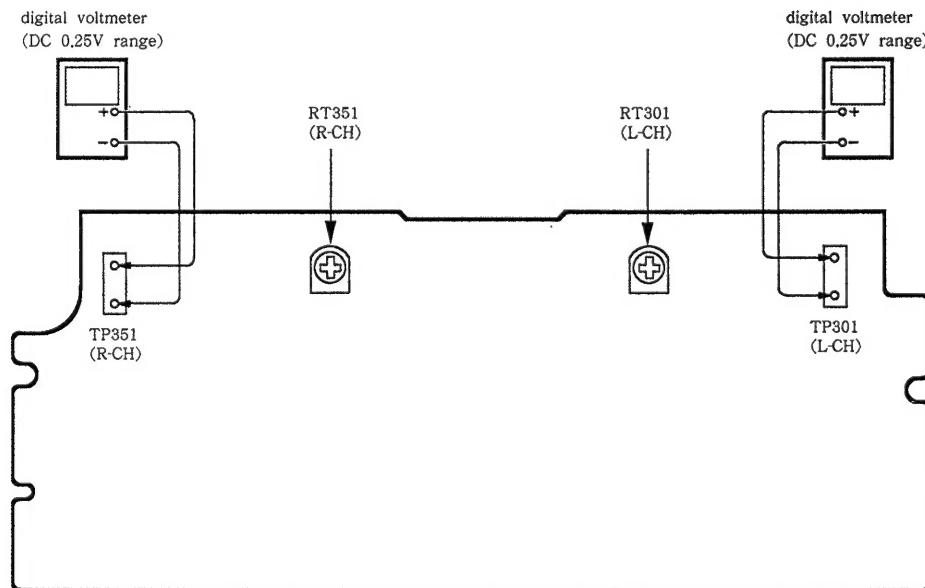
1. Adjust the idling after tuning the unit on for about 10-15 minutes, giving it time to warm up.
2. Always make sure to adjust the idling when repairing the power amp section or when replacing any parts.

IDLING ADJUSTMENT

Procedure :

Set the ATTENUATOR control as low as possible and adjust RT301 (L-CH) and RT351 (R-CH) so that the voltmeter reads 7mV at TP301 (L-CH) and TP351 (R-CH).

Adjustment Location : MAIN board



SECTION 3 DIAGRAMS

3-1. IC PIN FUNCTION

• IC601 DIGITAL RECEIVER (CXD2900Q)

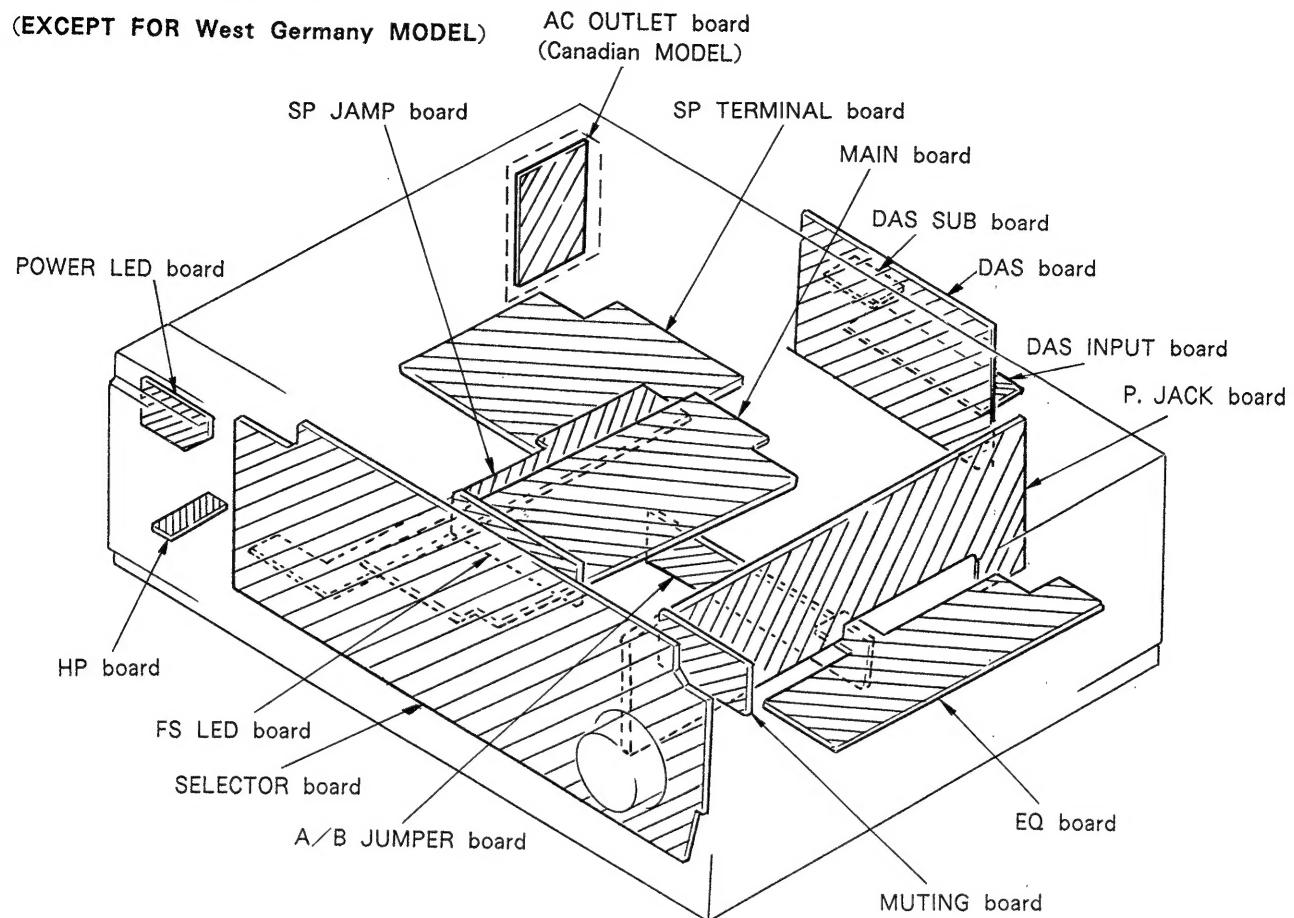
No.	SIGNAL	I/O	FUNCTION	No.	SIGNAL	I/O	FUNCTION
1	DIAN	①	Not used (+5V)	26	RX2	①	Not used (GND)
2	UREC	①	Not used (+5V)	27	RX3	①	Not used (GND)
3	XCLR	①	Not used (+5V)	28	S1	①	Not used (GND)
4	CKIN	I	Clock input	29	S2	①	Not used (GND)
5	DGND		Digital system ground	30	DVCC		Digital system +5V
6	DGND		Digital system ground	31	DRCE	◎	Not used (NC)
7	AVCC1		Analog system +5V	32	DGND		Digital system ground
8	VC OUT	O	VCO input	33	XTLO	O	Oscillation signal output
9	C1B		Connected capacitor for VCO	34	XTLI	I	Oscillation signal input
10	C1A		Connected capacitor for VCO	35	STOP	O	Oscillation control
11	R2		Connected resistor for VCO	36	DVCC		Digital system +5V
12	VCO1	I	VCO output	37	DVCC		Digital system +5V
13	R1		Connected resistor for VCO	38	MCK	O	Master clock (384FS)
14	AGND		Analog system ground	39	BCK	O	Bit clock (64FS)
15	AGND		Not used (NC)	40	ADDT	O	Audio data output 1
16	PHCO		Phase detector output	41	LRCK	O	LR clock (1FS)
17	PLVARI	I	PLL variable input	42	RECO	◎	Not used (NC)
18	PLREFI	I	PLL reference input	43	ANDT	①	Not used (NC)
19	AVCC2		Analog system +5V	44	MUTE	O	Audio mute control
20	PLREFO	O	PLL reference output	45	RECM	⑩	L : normal, H : mute Not used (NC)
21	PLVARO	O	PLL variable output	46	FS1	O	Sampling frequency data 1 ※Ⓐ
22	SWC		Not used (+5V)	47	FS2	O	Sampling frequency data 1 ※Ⓐ
23	T1		Not used (GND)	48	EMP	O	De-emphasys switch
24	T2		Not used (GND)				H : ON, L : OFF
25	RX1	I	Digital signal input 1				

※Ⓐ Sampling frequency data

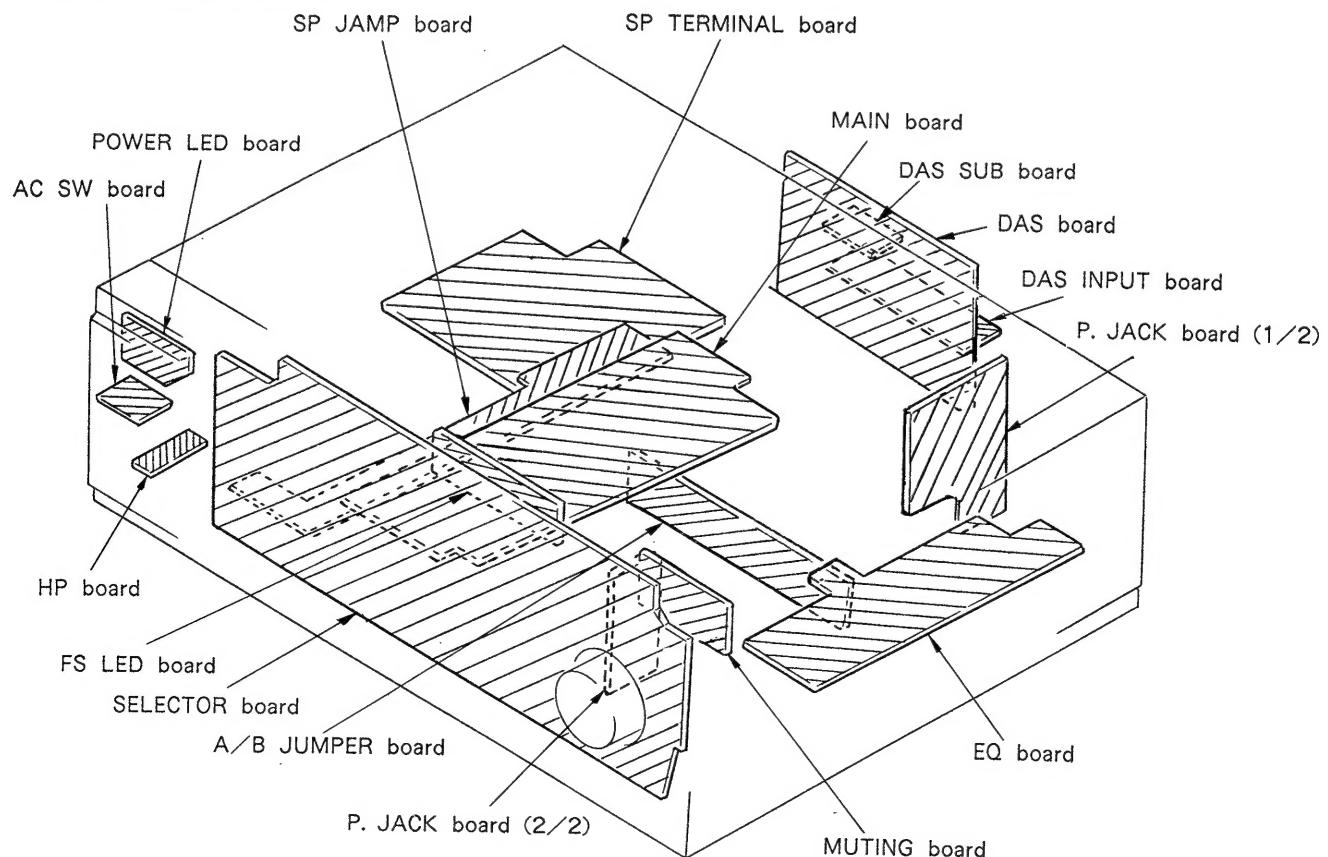
FS1 ⑧	FS2 ⑨	FS
L	L	44.1 kHz
L	H	48 kHz
H	L	—
H	H	32 kHz

3-2. CIRCUIT BOARDS LOCATION

(EXCEPT FOR West Germany MODEL)

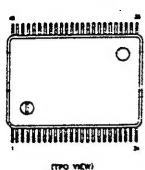


(West Germany MODEL)

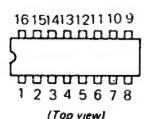


• SEMICONDUCTOR LEAD LAYOUTS

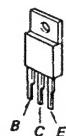
CXD2900Q



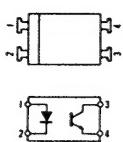
SN74HC139N
SN74HC153N



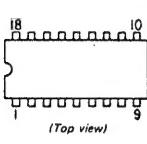
2SA985A
2SC2275A



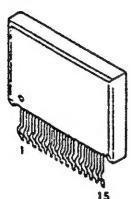
PC817



CXD2554P



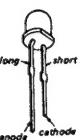
STK-3102MK3



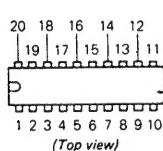
2SA988-F



SEL2510C



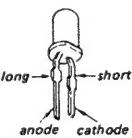
MC4044M



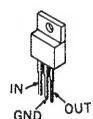
2SA1216-0
2SC2922-0



SEL2810A-C



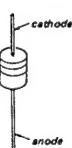
M5F78M05L
M5F7806L
M5F7815L



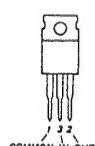
BN1F4M
2SA1175-HFE
2SC2785-HFE



UZL-7M1
1SS120
1SS168
1SS202-1
11ES2



M5F7915L
RC79M05FA



2SD774-34



1SS97-2
10E2N



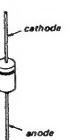
RC4560D
RC5532DD



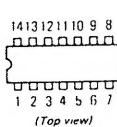
2SK241GR



30DF2

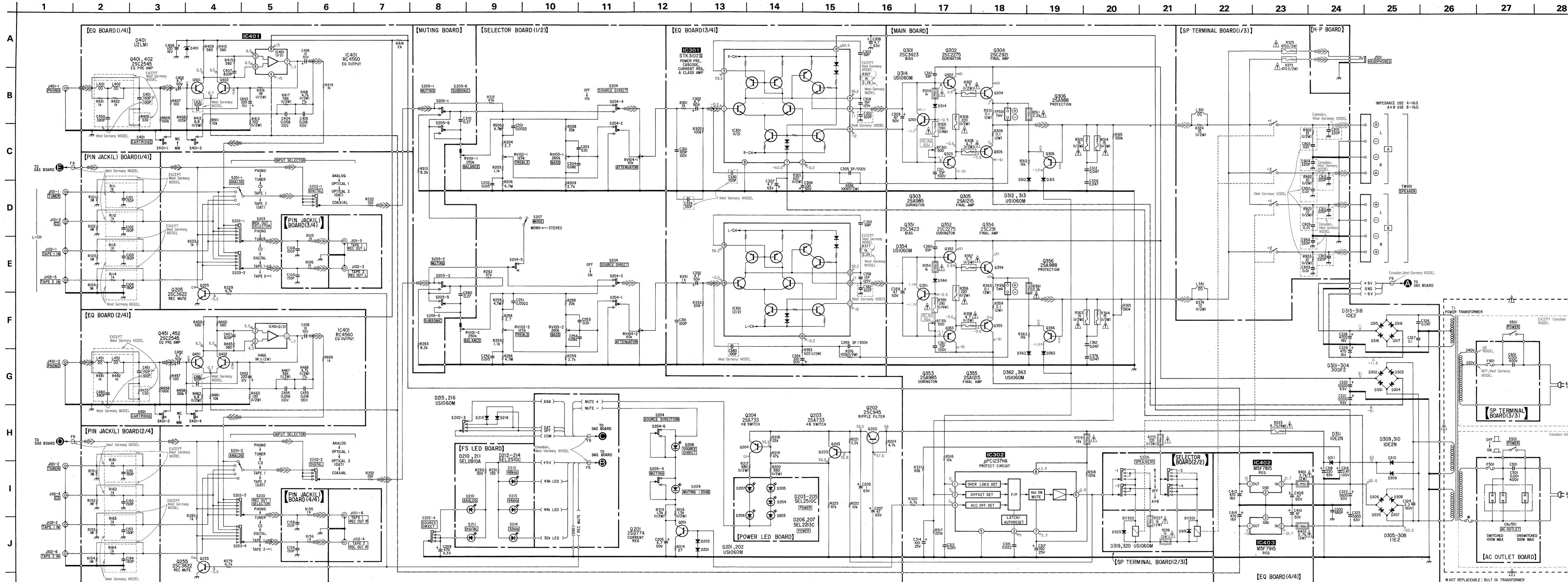


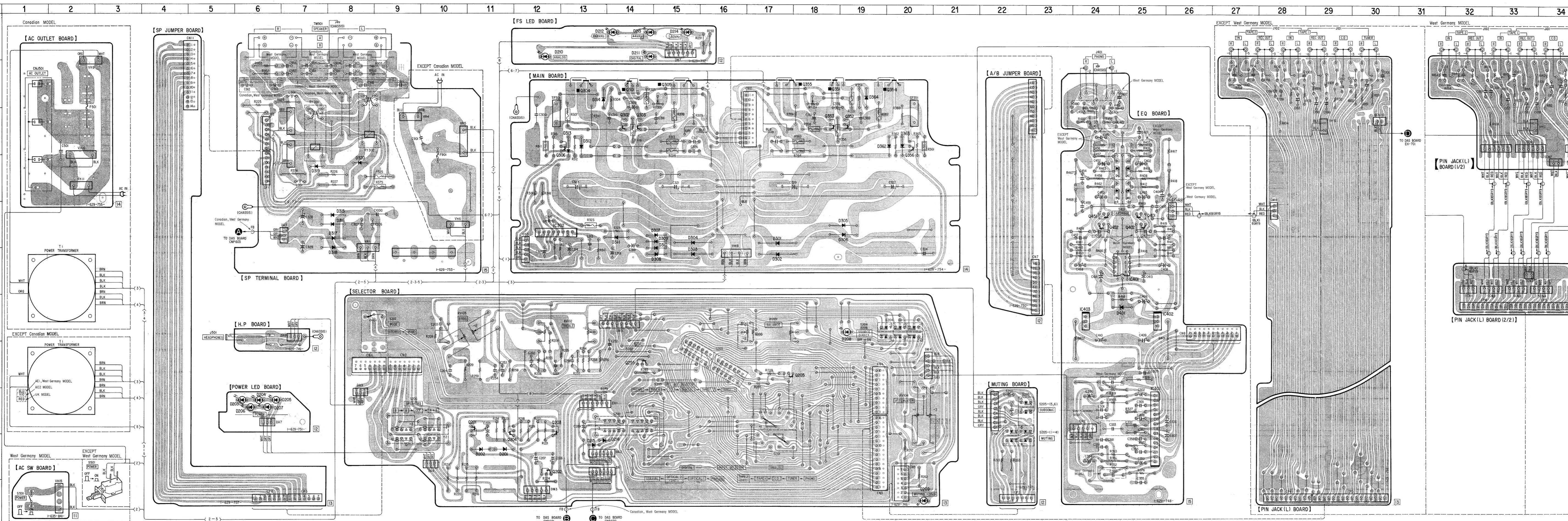
SN74HCU04N



KV1320

KV1320
 anode 2
 anode 1
 cathode

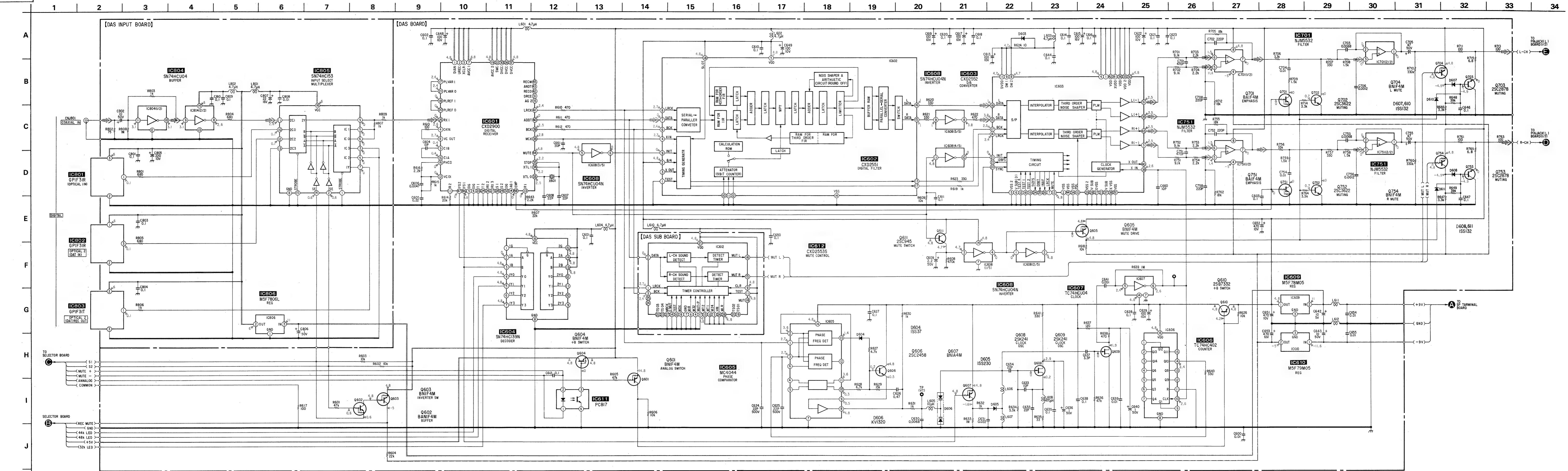




• SEMICONDUCTOR LOCATIO
AMP SECTION

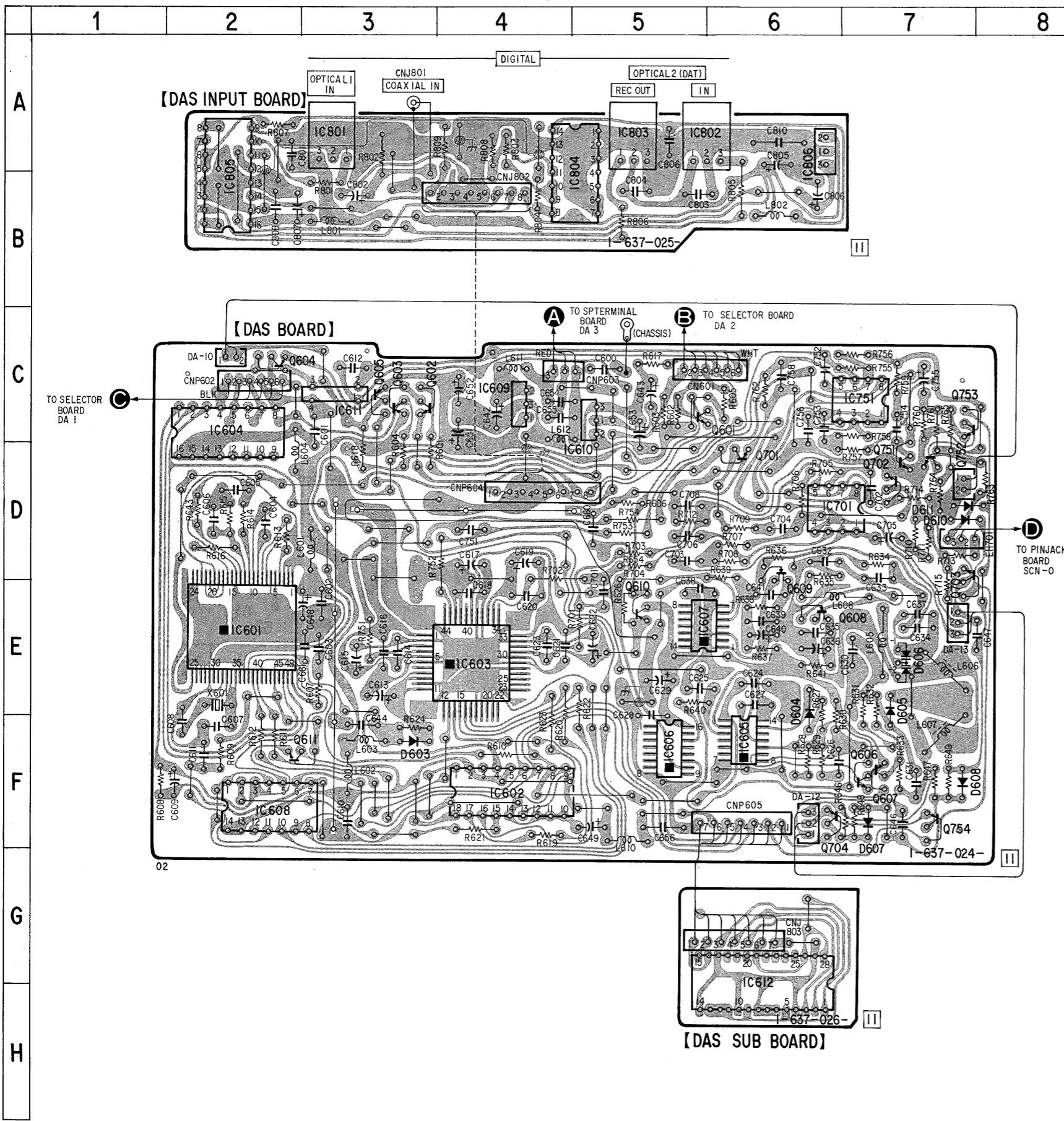
Ref. No.	Location	Ref. No.	L
IC301	I-25	D206	
IC302	E-12	D207	
IC401	F-25	D208	
IC402	G-52	D209	
IC403	G-24	D210	
		D211	
Q201	I-11	D212	
Q202	J-12	D213	
Q203	I-12	D214	
Q204	I-11	D215	
Q205	H-17		D216
Q255	H-14	D301	
Q301	B-14	D302	
Q302	C-14	D303	
Q303	C-14	D304	
Q304	B-13		D305
Q305	B-15	D306	
Q306	C-13	D307	
Q351	B-18	D308	
Q352	C-19	D309	
Q353	C-18		D310
Q354	B-20	D311	
Q355	B-17	D312	
Q356	C-20	D313	
Q401	E-25	D314	
Q402	E-25		D315
Q451	E-24	D316	
Q452	E-24	D317	
		D318	
		D319	
D201	J-11		
D202	J-11	D320	
D203	I-6	D362	
D204	I-6	D363	
D205	I-6	D364	

- Note :
O— : parts extracted from the component



3-6.PRINTED WIRING BOARDS -DAS SECTION-

• Refer to Page 8 for Semiconductor Lead Layouts.



• SEMICONDUCTOR LOCATION

DAS SECTION

Ref. No.	Location
IC601	E-2
IC602	F-4
IC603	E-4
IC604	C-2
IC605	F-6
IC606	F-5
IC607	E-5
IC608	F-2
IC609	C-4
IC610	C-5
IC611	C-3
IC612	G-6
IC701	D-6
IC751	C-7
IC801	A-3
IC802	A-5
IC803	A-5
IC804	A-5
IC805	A-2
IC806	A-6
Q601	C-5
Q602	C-3
Q603	C-3
Q604	C-2
Q605	C-3
Q606	F-7
Q607	F-7
Q608	E-6
Q609	D-6
Q610	E-5
Q611	F-2
Q701	D-6
Q702	D-7
Q703	D-7
Q704	F-6
Q751	D-7
Q752	D-7
Q753	C-7
Q754	F-7
D603	F-3
D604	E-6
D605	E-7
D606	E-7
D607	F-7
D608	F-7
D610	D-7
D611	D-7

Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF : $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4W$ or less unless otherwise specified.
- % : indicates tolerance.
- : nonflammable resistor.

Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B- Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PHONO
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : PHONO
- : DIGITAL (COAXIAL)

Note on Printed Wiring Boards :

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- : Pattern on the side which is seen.

SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

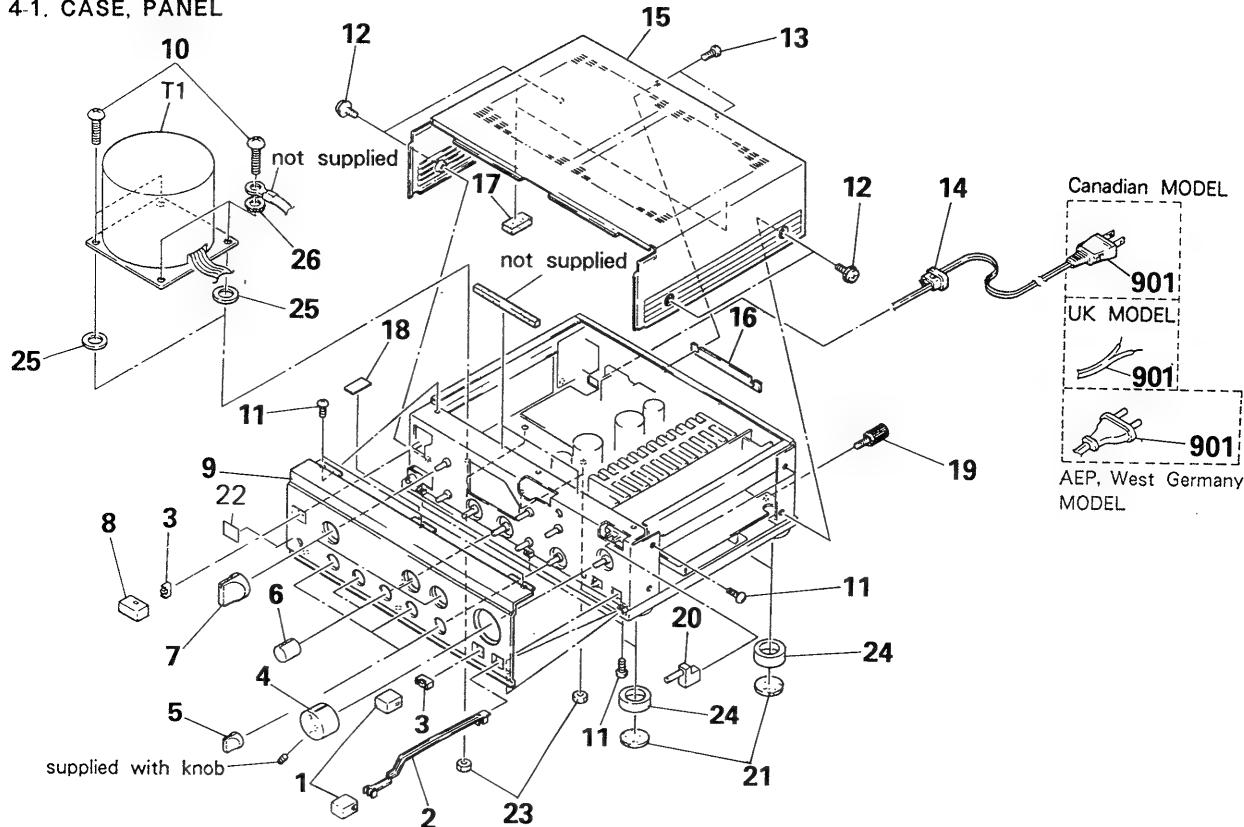
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:

(RED) ... KNOB, BALANCE (WHITE)
 ↑ ↑
 Cabinet's Color Parts' Color

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

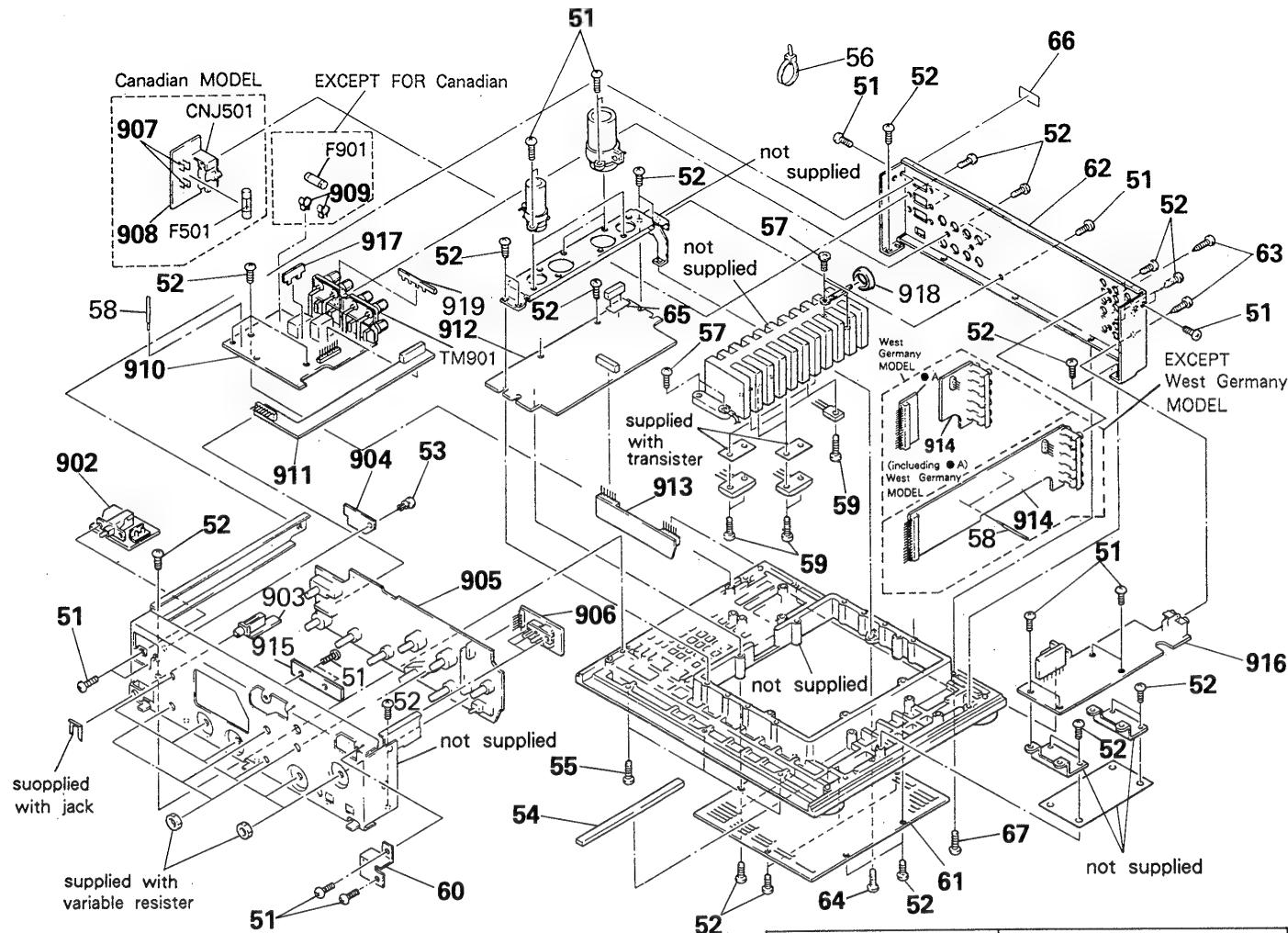
4-1. CASE, PANEL



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-875-01	KNOB, SQUARE		16	*4-929-232-01	SPACER	
2	4-929-227-01	JOINT		17	*2-527-517-00	CUSHION, CASE RETAINER	
3	4-864-307-00	RING		18	*3-846-067-21	SPACER (C)	
4	4-929-224-01	KNOB (NA-48)		19	*4-941-033-01	SCREW, FIXED, FEEDER	
5	4-937-831-01	KNOB (FLAT-21)		20	4-923-879-01	BUTTON (DIA.4)	
6	4-937-833-01	KNOB (ROUND-21)		21	*4-923-850-01	FOOT (DIA. 46)	
7	4-937-832-01	KNOB (FLAT-29)		22	*3-703-710-41	STICKER, SONY SYMBOL (12)	
8	4-908-856-01	KNOB, SQUARE		23	7-684-024-04	N 4, TYPE 2	
9	A-4323-694-A	(Canadian,UK).....PANEL ASSY, FRONT		24	4-923-882-02	RING (LARGE-16), ORNAMENTAL, FOOT	
	A-4323-696-A	(AEP,West Germany)....PANEL ASSY, FRONT		25	4-885-984-21	WASHER	
				26	7-623-423-07	LW 4, TYPE B	
10	7-682-566-09	SCREW +B 4X20		901	▲.1-574-383-11	(AEP,West Germany)...CORD, POWER (AEP)	
11	7-682-547-09	SCREW +BVTT 3X6 (S)		▲.1-574-384-11	(UK).....CORD, POWER (WITH CONNECTOR)		
12	4-847-802-00	SCREW		▲.1-575-105-11	(Canadian).....CORD, POWER		
13	7-682-549-09	SCREW +BVTT 3X10 (S)		T1	▲.1-450-257-11	(Canadian).....TRANSFORMER, POWER	
14	*3-703-244-00	BUSHING (2104), CORD		T1	▲.1-450-258-11	(AE1,West Germany)....TRANSFORMER, POWER	
15	4-916-737-31	(EXCEPT AE2)...CASE		T1	▲.1-450-259-11	(AE2).....TRANSFORMER, POWER	
	4-916-737-41	(AE2).....CASE		T1	▲.1-450-260-11	(UK).....TRANSFORMER, POWER	

4-2. CHASSIS, BACK PANEL

● A : JUMPER BOARD (West Germany Model)

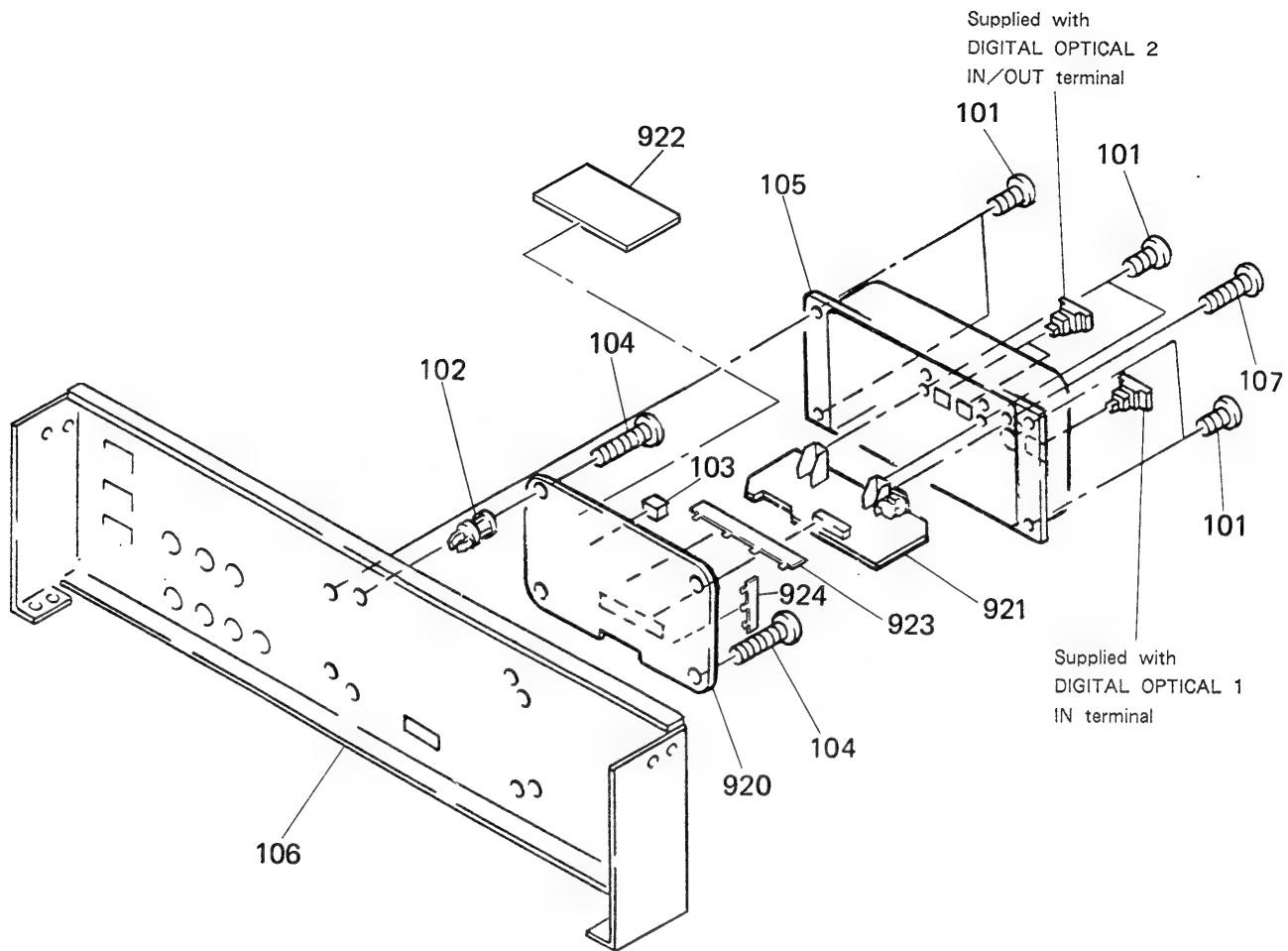


Note:
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	7-682-547-09	SCREW +BVTT 3X6 (S)		906	*1-629-747-11	PC BOARD, MUTING	
52	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT		907	1-533-190-11	(Canadian)...CLIP, FUSE	
53	4-812-134-00	RIVET NYLON, 3.5		908	*1-629-755-11	(Canadian)...PC BOARD, AC OUTLET	
54	*4-916-782-21	DAMPER		909	1-533-183-11	(EXCEPT Canadian)...HOLDER, FUSE	
				910	*1-629-753-11	PC BOARD, SP TERMINAL	
55	7-682-549-09	SCREW +BVTT 3X10 (S)		911	*1-635-757-11	(EXCEPT West Germany)...PC BOARD, SP JAMP	
56	3-655-653-21	BAND (TAITON), BINDING			*1-635-839-11	(West Germany).....PC BOARD, SP JAMP	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 SLIT		912	*A-4341-437-A	OUNTED PCB, MAIN	
58	*4-352-844-01	PIN, LEAD, COATING		913	*1-629-750-11	PC BOARD, A/B JUMPER	
59	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3		914	*1-629-758-11	(EXCEPT West Germany)..PC BOARD, P.JACK(L)	
60	*4-937-801-01	BRACKET, SW			*1-635-837-11	(West Germany).....PC BOARD, P.JACK(L)	
61	*4-916-732-01	BOARD, BOTTOM		915	*1-629-752-11	PC BOARD, FS-LED	
62	*4-929-239-03	(Canadian).....PANEL, BACK		916	*A-4334-901-A	(EXCEPT West Germany)...OUNTED PCB, EQ	
	*4-929-239-21	(EXCEPT Canadian)...PANEL, BACK			*A-4341-436-A	(West Germany).....OUNTED PCB, EQ	
63	7-621-849-00	SCREW (BV/RING)		917	*1-560-242-61	BUS BAR 2P	
64	7-682-550-09	SCREW +BVTT 3X12 (S)		918	*1-543-648-11	(Canadian,West Germany)...BEAD, FERRITE	
65	*4-921-941-31	CUSHION (FL)		919	*1-560-242-31	(Canadian,West Germany)...BUS BAR 5P	
66	*3-703-270-00	(Canadian)...LABEL, AC 120V. 60Hz		CNJ501	*1-540-062-31	(Canadian)...OUTLET, AC (POLAR)	
67	7-685-876-09	SCREW +BVTT 3X16 (S)					
902	*1-635-841-11	(West Germany)...PC BOARD, AC SW		F501	*1-532-510-11	(Canadian)...FUSE, GLASE-TUBE (8A)	
903	*1-629-749-11	PC BOARD, HP		F901	*1-532-350-00	(EXCEPT Canadian)...FUSE, TIME-LAG (4A)	
904	*1-629-751-11	PC BOARD, POWER LED		TM901	1-537-227-11	(AE2).....TERMINAL BOARD (SP)	
905	*A-4341-209-A	(EXCEPT AE2)...OUNTED PCB, SELECTOR		TM901	1-537-228-11	(West Germany).....TERMINAL BOARD (SP)	
	*A-4341-215-A	(AE2).....OUNTED PCB, SELECTOR		TM901	1-537-235-11	(Canadian,AE1,UK)...TERMINAL BOARD (SP)	

4-3. D/A CONVERTER SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	7-682-547-09	SCREW +BVTT 3X6 (S)		920	*A-4341-211-A	MOUNTED PCB, DAS	
102	*4-884-992-00	SUPPORT, PC		921	*A-4341-212-A	MOUNTED PCB, DAS INPUT	
103	*4-929-244-01	CUSHION		922	*1-637-026-11	PC BOARD, DAS SUB	
104	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S		923	*1-560-242-21	BUS BAR 4P	
105	*4-929-238-01	CASE, SHIELD		924	*1-560-242-11	BUS BAR 3P	
106	*4-929-239-03	(Canadian)...PANEL, BACK					
	*4-929-239-21	(EXCEPT Canadian)...PANEL, BACK					
107	7-621-849-00	SCREW, TAPPING					

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μ F, PF: $\mu\mu$ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
 UA...: μ A..., UPA...: μ PA...,
 UPC...: μ PC, UPD...: μ PD...

The components identified by mark or dotted line with mark are critical for safety.
 Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901	1-574-383-11	(AEP, West Germany)...CORD, POWER (AEP)	C154	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V
	1-574-384-11	(UK).....CORD, POWER (WITH CONNECTOR)	C158	1-162-284-31	CERAMIC 150PF 10% 50V
	1-575-105-11	(Canadian).....CORD, POWER	C159	1-162-284-31	CERAMIC 150PF 10% 50V
902	*1-635-841-11	(West Germany)...PC BOARD, AC SW	C201	1-130-475-00	MYLAR 0.0022MF 5% 50V
903	*1-629-749-11	PC BOARD, HP	C202	1-130-485-00	MYLAR 0.015MF 5% 50V
904	*1-629-751-11	PC BOARD, POWER LED	C203	1-130-483-00	MYLAR 0.01MF 5% 50V
905	*A-4341-209-A	(EXCEPT AE2)...MOUNTED PCB, SELECTOR	C204	1-136-164-00	FILM 0.082MF 5% 50V
	*A-4341-215-A	(AE2).....MOUNTED PCB, SELECTOR	C205	1-123-369-00	ELECT 4.7MF 20% 50V
906	*1-629-747-11	PC BOARD, MUTING	C206	1-123-380-00	ELECT 1MF 20% 63V
907	1-533-190-11	(Canadian)...CLIP, FUSE	C207	1-124-918-11	ELECT 47MF 20% 63V
908	*1-629-755-11	(Canadian)...PC BOARD, AC OUTLET	C209	1-124-472-11	ELECT 470MF 20% 6.3V
909	1-533-183-11	(EXCEPT Canadian)...HOLDER, FUSE	C210	1-136-170-00	FILM 0.27MF 5% 50V
910	*1-629-753-11	PC BOARD, SP TERMINAL	C251	1-130-475-00	MYLAR 0.0022MF 5% 50V
911	*1-635-757-11	(EXCEPT West Germany)...PC BOARD, SP JAMP	C252	1-130-485-00	MYLAR 0.015MF 5% 50V
	*1-635-839-11	(West Germany).....PC BOARD, SP JAMP	C253	1-130-483-00	MYLAR 0.01MF 5% 50V
912	*A-4341-437-A	MOUNTED PCB, MAIN	C254	1-136-164-00	FILM 0.082MF 5% 50V
913	*1-629-750-11	PC BOARD, A/B JUMPER	C260	1-136-170-00	FILM 0.27MF 5% 50V
914	*1-629-758-11	(EXCEPT West Germany) ...PC BOARD, P.JACK (L)	C300	1-162-292-31	CERAMIC 680PF 10% 50V
	*1-635-837-11	(West Germany)...PC BOARD, P.JACK (L)	C301	1-136-808-11	FILM 100PF 5% 100V
915	*1-629-752-11	PC BOARD, FS-LED	C302	1-123-369-00	ELECT 4.7MF 20% 50V
916	*A-4334-901-A	(EXCEPT West Germany)...MOUNTED PCB, EQ	C303	1-104-276-11	POLYSTYRENE 68PF 10% 50V
	*A-4341-436-A	(West Germany).....MOUNTED PCB, EQ	C304	1-126-052-11	ELECT 100MF 20% 50V
917	*1-560-242-61	BUS BAR 2P	C305	1-107-044-00	MICA 3PF 0.5PF 500V
918	*1-543-648-11	(Canadian, West Germany)...BEAD, FERRITE	C306	1-123-369-00	ELECT 4.7MF 20% 63V
919	*1-560-242-31	(Canadian, West Germany)...BUS BAR 5P	C307	1-123-369-00	ELECT 4.7MF 20% 63V
920	*A-4341-211-A	MOUNTED PCB, DAS	C308	1-104-263-00	POLYSTYRENE 15PF 10% 125V
921	*A-4341-212-A	MOUNTED PCB, DAS INPUT	C309	1-124-910-11	ELECT 47MF 20% 50V
922	*1-637-026-11	PC BOARD, DAS SUB	C310	1-107-159-00	MICA 33PF 5% 500V
923	*1-560-242-21	BUS BAR 4P	C311	1-107-159-00	MICA 33PF 5% 500V
924	*1-560-242-11	BUS BAR 3P	C312	1-136-161-00	FILM 0.047MF 5% 50V
C101	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C313	1-130-471-00	MYLAR 0.001MF 5% 50V
C102	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C314	1-123-333-00	ELECT 100MF 20% 25V
C103	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C315	1-130-487-00	MYLAR 0.022MF 5% 50V
C104	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C317	1-123-333-00	ELECT 100MF 20% 25V
C108	1-162-284-31	CERAMIC 150PF 10% 50V	C318	1-123-604-00	ELECT 220MF 20% 63V
C109	1-162-284-31	CERAMIC 150PF 10% 50V	C319	1-123-379-00	ELECT 0.47MF 20% 100V
C151	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C320	1-125-460-11	CAP, ELECT 12000MF
C152	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C321	1-125-460-11	CAP, ELECT 12000MF
C153	1-162-284-31	(West Germany)...CERAMIC 150PF 10% 50V	C322	1-125-558-11	CAP, ELECT 5600MF
			C323	1-125-558-11	CAP, ELECT 5600MF
			C324	1-136-880-11	FILM 2.2MF 10% 160V
			C326	1-136-161-00	FILM 0.047MF 5% 50V
			C327	1-136-165-00	FILM 0.1MF 5% 50V
			C328	1-124-523-11	ELECT 4700MF 20% 16V
			C329	1-126-103-11	ELECT 470MF 20% 16V

Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
C330	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C612	1-136-165-00	FILM	0.1MF	5%	50V	
C332	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C613	1-126-101-11	ELECT	100MF	20%	10V	
C333	1-162-288-31	(West Germany)...CERAMIC	330PF	10%	50V		C614	1-164-159-11	CERAMIC	0.1MF		50V	
C351	1-136-808-11	FILM	100PF	5%	100V		C615	1-126-101-11	ELECT	100MF	20%	10V	
C352	1-123-369-00	ELECT	4.7MF	20%	50V		C616	1-164-159-11	CERAMIC	0.1MF	50V		
C353	1-104-276-11	POLYSTYRENE	68PF	10%	50V		C617	1-126-101-11	ELECT	100MF	20%	10V	
C354	1-126-052-11	ELECT	100MF	20%	50V		C618	1-164-159-11	CERAMIC	0.1MF		50V	
C355	1-107-044-00	MICA	3PF	0.5PF	500V		C619	1-126-101-11	ELECT	100MF	20%	10V	
C358	1-104-263-00	POLYSTYRENE	15PF	10%	125V		C620	1-164-159-11	CERAMIC	0.1MF		50V	
C359	1-124-910-11	ELECT	47MF	20%	50V		C621	1-164-159-11	CERAMIC	0.1MF		50V	
C360	1-107-159-00	MICA	33PF	5%	500V		C622	1-126-101-11	ELECT	100MF	20%	10V	
C361	1-107-159-00	MICA	33PF	5%	500V		C623	1-164-159-11	CERAMIC	0.1MF		50V	
C362	1-136-161-00	FILM	0.047MF	5%	50V		C624	1-107-210-00	MICA	22PF	5%	500V	
C376	1-136-161-00	FILM	0.047MF	5%	50V		C625	1-107-210-00	MICA	22PF	5%	500V	
C380	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C626	1-136-173-00	FILM	0.47MF	5%	50V	
C382	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C627	1-164-159-11	CERAMIC	0.1MF		50V	
C401	1-102-973-00	(West Germany)...CERAMIC	100PF	5%	50V		C628	1-164-159-11	CERAMIC	0.1MF		50V	
C401	1-104-282-11	(EXCEPT West Germany)					C629	1-126-101-11	ELECT	100MF	20%	10V	
		...POLYSTYRENE	150PF	5%	50V		C630	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C402	1-123-369-00	ELECT	4.7MF	20%	50V		C631	1-130-487-00	MYLAR	0.022MF	5%	50V	
C403	1-124-997-11	ELECT	470MF	20%	10V		C632	1-162-207-31	CERAMIC	22PF	5%	50V	
C404	1-130-341-00	FILM	0.056MF	3%	100V		C633	1-162-199-31	CERAMIC	10PF	5%	50V	
C405	1-130-971-00	FILM	0.016MF	3%	100V		C634	1-162-207-31	CERAMIC	22PF	5%	50V	
C406	1-123-333-00	ELECT	100MF	20%	16V		C635	1-162-306-11	CERAMIC	0.01MF	20%	16V	
C407	1-130-470-00	MYLAR	820PF	5%	50V		C636	1-123-380-00	ELECT	1MF	20%	50V	
C408	1-126-059-11	ELECT	10MF	20%	50V		C637	1-162-193-31	CERAMIC	3.3PF	10%	50V	
C409	1-124-910-11	ELECT	47MF	20%	50V		C638	1-164-159-11	CERAMIC	0.1MF		50V	
C410	1-124-910-11	ELECT	47MF	20%	50V		C639	1-162-306-11	CERAMIC	0.01MF	20%	16V	
C413	1-126-103-11	ELECT	470MF	20%	16V		C640	1-123-380-00	ELECT	1MF	20%	50V	
C414	1-126-103-11	ELECT	470MF	20%	16V		C641	1-162-294-31	CERAMIC	0.001MF	10%	50V	
C430	1-110-342-11	(West Germany)...MYLAR	390PF	5%	50V		C642	1-126-059-11	ELECT	10MF	20%	50V	
C431	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C643	1-126-059-11	ELECT	10MF	20%	50V	
C451	1-102-973-00	(West Germany)...CERAMIC	100PF	5%	50V		C644	1-164-159-11	CERAMIC	0.1MF		50V	
C451	1-104-282-11	(EXCEPT West Germany)					C646	1-136-165-00	FILM	0.1MF	5%	50V	
		...POLYSTYRENE	150PF	5%	50V		C647	1-136-165-00	FILM	0.1MF	5%	50V	
C452	1-123-369-00	ELECT	4.7MF	20%	50V		C648	1-126-101-11	ELECT	100MF	20%	10V	
C453	1-124-997-11	ELECT	470MF	20%	10V		C649	1-126-101-11	ELECT	100MF	20%	10V	
C454	1-130-341-00	FILM	0.056MF	3%	100V		C650	1-164-159-11	CERAMIC	0.1MF		50V	
C455	1-130-971-00	FILM	0.016MF	3%	100V		C651	1-124-997-11	ELECT	470MF	20%	10V	
C457	1-130-470-00	MYLAR	820PF	5%	50V		C652	1-124-997-11	ELECT	470MF	20%	10V	
C458	1-126-059-11	ELECT	10MF	20%	50V		C653	1-124-997-11	ELECT	470MF	20%	10V	
C480	1-110-342-11	(West Germany)...MYLAR	390PF	5%	50V		C654	1-101-004-00	CERAMIC	0.01MF		50V	
C481	1-162-282-31	(West Germany)...CERAMIC	100PF	5%	50V		C655	1-101-004-00	CERAMIC	0.01MF		50V	
C501	A.1-161-741-51	(Canadian)...CERAMIC	0.001	10%	400V		C660	1-162-199-31	CERAMIC	10PF	5%	50V	
C600	1-162-306-11	CERAMIC	0.01MF	20%	16V		C661	1-162-206-31	CERAMIC	20PF	5%	50V	
C601	1-164-159-11	CERAMIC	0.1MF		50V		C701	1-130-467-00	MYLAR	470PF	5%	50V	
C602	1-164-159-11	CERAMIC	0.1MF		50V		C702	1-162-286-31	CERAMIC	220PF	10%	50V	
C603	1-136-165-00	FILM	0.1MF	5%	50V		C703	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C604	1-107-202-00	MICA	10PF	0.5PF	500V		C704	1-130-483-00	MYLAR	0.01MF	5%	50V	
C605	1-136-169-00	FILM	0.22MF	5%	50V		C705	1-124-910-11	ELECT	47MF	20%	50V	
C606	1-130-479-00	MYLAR	0.0047MF	5%	50V		C706	1-130-472-00	MYLAR	0.0012MF	5%	50V	
C607	1-107-210-00	MICA	22PF	5%	500V		C708	1-110-339-11	MYLAR	220PF	5%	50V	
C608	1-107-210-00	MICA	22PF	5%	500V		C751	1-130-467-00	MYLAR	470PF	5%	50V	
C609	1-123-381-00	ELECT	2.2MF	20%	50V		C752	1-162-286-31	CERAMIC	220PF	10%	50V	
C610	1-164-159-11	CERAMIC	0.1MF		50V		C753	1-130-481-00	MYLAR	0.0068MF	5%	50V	
C611	1-136-165-00	FILM	0.1MF	5%	50V		C754	1-130-483-00	MYLAR	0.01MF	5%	50V	
							C755	1-124-910-11	ELECT	47MF	20%	50V	

Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C756	1-130-472-00	MYLAR 0.0012MF 5% 50V	D204	8-719-303-00	LED SEL2510C (POWER)
C758	1-110-339-11	MYLAR 220PF 5% 50V	D205	8-719-303-00	LED SEL2510C (POWER)
C801	1-136-165-00	FILM 0.1MF 5% 50V	D206	8-719-302-23	LED SEL2213C-C-TP (POWER)
C802	1-126-059-11	ELECT 10MF 20% 50V	D207	8-719-302-23	LED SEL2213C-C-TP (POWER)
C803	1-136-165-00	FILM 0.1MF 5% 50V	D208	8-719-301-52	LED SEL2810A-C (SOURCE DIRECT)
C804	1-136-165-00	FILM 0.1MF 5% 50V	D209	8-719-301-52	LED SEL2810A-C (MUTING -20dB)
C805	1-126-335-11	ELECT 220MF 20% 10V	D210	8-719-301-52	LED SEL2810A-C (ANALOG)
C806	1-123-380-00	ELECT 1MF 20% 50V	D211	8-719-301-52	LED SEL2810A-C (DIGITAL)
C807	1-123-330-00	ELECT 22MF 20% 16V	D212	8-719-303-00	LED SEL2510C (48kHz)
C808	1-162-306-11	CERAMIC 0.01MF 20% 16V	D213	8-719-303-00	DIODE SEL2510C (44kHz)
C809	1-136-165-00	FILM 0.1MF 5% 50V	D214	8-719-303-00	DIODE SEL2510C (32kHz)
C810	1-136-165-00	FILM 0.1MF 5% 50V	D215	8-719-912-20	DIODE 1SS120
C901	△1-161-741-00	(EXCEPT Canadian) ...CERAMIC 0.001MF 10% 400V	D216	8-719-912-20	DIODE 1SS120
C902	1-136-153-00	(West Germany)...FILM 0.01MF 5% 50V	D301	8-719-230-02	DIODE 30DF2
C903	1-136-153-00	(West Germany)...FILM 0.01MF 5% 50V	D302	8-719-230-02	DIODE 30DF2
C904	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D303	8-719-230-02	DIODE 30DF2
C910	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D304	8-719-230-02	DIODE 30DF2
C911	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D305	8-719-200-82	DIODE 11ES2
C912	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D306	8-719-200-82	DIODE 11ES2
C913	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D307	8-719-200-82	DIODE 11ES2
C952	1-136-153-00	(West Germany)...FILM 0.01MF 5% 50V	D308	8-719-200-82	DIODE 11ES2
C953	1-136-153-00	(West Germany)...FILM 0.01MF 5% 50V	D309	8-719-200-82	DIODE 11ES2
C954	1-102-978-00	(Canadian, West Germany) ...CERAMIC 220PF 5% 50V	D310	8-719-200-82	DIODE 11ES2
C1000	1-161-379-00	CERAMIC 0.01MF 20% 25V	D311	8-719-200-82	DIODE 11ES2
CN1	*1-561-651-00	SOCKET, CONNECTOR 7P	D312	8-719-912-20	DIODE 1SS120
CN2	*1-561-651-00	SOCKET, CONNECTOR 7P	D313	8-719-912-20	DIODE 1SS120
CN3	1-568-118-11	SOCKET, CONNECTOR 16P	D314	8-719-912-20	DIODE 1SS120
CN4	*1-562-334-00	SOCKET, CONNECTOR 10P	D315	8-719-200-77	DIODE 1OE2N
CN5	*1-561-651-00	SOCKET, CONNECTOR 7P	D316	8-719-200-77	DIODE 1OE2N
CN6	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P	D317	8-719-200-77	DIODE 1OE2N
CN7	1-568-203-11	PIN, CONNECTOR (PC BOARD) 11P	D318	8-719-200-77	DIODE 1OE2N
CN8	*1-563-381-11	SOCKET, CONNECTOR 11P	D319	8-719-912-20	DIODE 1SS120
CN9	*1-566-451-11	(EXCEPT West Germany) ...HOUSING, CONNECTOR 3P	D320	8-719-912-20	DIODE 1SS120
CN10	*1-563-381-11	SOCKET, CONNECTOR 11P	D362	8-719-912-20	DIODE 1SS120
CN11	1-568-117-11	SOCKET, CONNECTOR 14P	D363	8-719-912-20	DIODE 1SS120
CNJ501	△1-540-062-31	(Canadian)...OUTLET, AC (POLAR)	D364	8-719-912-20	DIODE 1SS120
CNJ605	1-560-944-00	PIN, CONNECTOR 7P	D401	8-719-000-84	DIODE UZL-7M1
CNJ802	*1-565-484-11	CONNECTOR, BOARD TO BOARD 8P	D603	8-719-912-20	DIODE 1SS120
CNJ803	*1-565-483-11	CONNECTOR, BOARD TO BOARD 7P	D604	8-719-123-78	DIODE 1SS97-2
CNP601	*1-564-340-00	PIN, CONNECTOR 6P	D605	8-719-903-27	DIODE 1SS168
CNP602	*1-564-340-61	PIN, CONNECTOR 6P	D606	8-719-901-59	DIODE KV1320
CNP603	*1-564-337-71	PIN, CONNECTOR 3P	D607	8-719-107-94	DIODE 1SS202-1
CNP604	*1-508-694-00	CONNECTOR PIN 8P	D608	8-719-107-94	DIODE 1SS202-1
CP1	*1-560-532-00	PIN, CONNECTOR 7P	D610	8-719-912-20	DIODE 1SS120
CP2	*1-560-532-00	PIN, CONNECTOR 7P	D611	8-719-912-20	DIODE 1SS120
CP3-A	*1-560-532-00	PIN, CONNECTOR 7P	EH1	*1-564-509-11	PLUG, CONNECTOR 6P
CP3-B	*1-568-204-11	PIN, CONNECTOR (PC BOARD) 16P	EH2	*1-564-508-11	PLUG, CONNECTOR 5P
CP4	*1-568-202-11	PIN, CONNECTOR (PC BOARD) 10P	EH3	*1-564-508-11	PLUG, CONNECTOR 5P
CP5	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P	EH4	*1-564-511-11	PLUG, CONNECTOR 8P
CP6	1-568-120-11	PIN, CONNECTOR (PC BOARD) 7P	EH401	*1-564-506-11	(West Germany)...PLUG, CONNECTOR 3P
D201	8-719-912-20	DIODE 1SS120	EH701	*1-564-506-11	PLUG, CONNECTOR 3P
D202	8-719-912-20	DIODE 1SS120	F501	△1-532-510-11	(Canadian)...FUSE, GLASE-TUBE (8A)
D203	8-719-303-00	LED SEL2510C (POWER)	F901	△1-532-350-00	(EXCEPT Canadian)...FUSE, TIME-LAG(4A)
IC301	8-749-921-87	IC STK3102N-MK3	IC302	8-759-111-68	IC UPC1237HA
IC302	8-759-111-68	IC UPC1237HA	IC401	8-759-981-96	IC RC4560D.

Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
IC402	8-759-604-34	IC M5F7815L	Q351	8-729-203-45	TRANSISTOR 2SC3423-0
IC403	8-759-604-52	IC M5F7915L	Q352	8-729-107-54	TRANSISTOR 2SC2275A
IC601	8-759-994-60	IC CXD2900Q	Q353	8-729-190-53	TRANSISTOR 2SA985A
IC602	8-752-337-09	IC CXD2554P	Q354	8-729-300-11	TRANSISTOR 2SC2922-0
IC603	8-752-335-51	IC CXD2552Q-1	Q355	8-729-300-10	TRANSISTOR 2SA1216-0
IC604	8-759-916-46	IC SN74HC139N	Q356	8-729-108-14	TRANSISTOR 2SA988-F
IC605	8-759-013-39	IC MC4044M	Q401	8-729-354-52	TRANSISTOR 2SC2545
IC606	8-759-242-57	IC TC74HC4020AF	Q402	8-729-354-52	TRANSISTOR 2SC2545
IC607	8-759-233-64	IC TC74HCU04AF	Q451	8-729-354-52	TRANSISTOR 2SC2545
IC608	8-759-917-18	IC SN74HCU04N	Q452	8-729-354-52	TRANSISTOR 2SC2545
IC609	8-759-604-35	IC M5F78M05L	Q601	8-729-115-13	TRANSISTOR BN1F4M
IC610	8-759-982-52	IC RC79M05FA	Q602	8-729-900-36	TRANSISTOR DTC124ES
IC611	8-719-902-56	DIODE PC817	Q603	8-729-115-13	TRANSISTOR BN1F4M
IC612	8-752-334-77	IC CXD2553S	Q604	8-729-115-13	TRANSISTOR BN1F4M
IC701	8-759-982-03	IC RC5532DD	Q605	8-729-900-61	TRANSISTOR DTA114ES
IC751	8-759-982-03	IC RC5532DD	Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE
IC801	8-759-977-72	IC GP1F31R	Q607	8-729-900-61	TRANSISTOR DTA114ES
IC802	8-759-977-72	IC GP1F31R	Q608	8-729-200-56	TRANSISTOR 2SK241GR
IC803	8-759-977-71	IC GP1F31T	Q609	8-729-200-56	TRANSISTOR 2SK241GR
IC804	8-759-917-18	IC SN74HCU04N	Q610	8-729-119-76	TRANSISTOR 2SA1175-HFE
IC805	8-759-921-17	IC SN74HC153N	Q611	8-729-194-57	TRANSISTOR 2SC945-P
IC806	8-759-604-84	IC M5F7806L	Q701	8-729-900-36	TRANSISTOR DTC124ES
J101	*1-580-027-11	JACK, PIN 6P (REC OUT/CD/TUNER)	Q702	8-729-141-26	TRANSISTOR 2SC3622A-LK
J102	*1-580-028-11	JACK, PIN 6P (IN/REC OUT/IN)	Q703	8-729-201-05	TRANSISTOR 2SC2878B
J401	1-568-250-21	JACK, PIN 2P (PHONO)	Q704	8-729-115-13	TRANSISTOR BN1F4M
J501	1-507-863-51	JACK, LARGE TYPE (HEADPHONES)	Q751	8-729-900-36	TRANSISTOR DTC124ES
J801	1-568-249-21	JACK, PIN 1P (COAXIAL IN)	Q752	8-729-141-26	TRANSISTOR 2SC3622A-LK
L301	1-428-133-11	COIL, AIR-CORE	Q753	8-729-201-05	TRANSISTOR 2SC2878B
L351	1-428-133-11	COIL, AIR-CORE	Q754	8-729-115-13	TRANSISTOR BN1F4M
L401	1-424-397-11	(West Germany)...COIL, CHOKE 200UH	R000	1-247-725-11	CARBON 10K 5% 1/4W
L402	1-424-397-11	(West Germany)...COIL, CHOKE 200UH	R101	1-246-545-00	CARBON 1M 5% 1/4W
L451	1-424-397-11	(West Germany)...COIL, CHOKE 200UH	R102	1-246-545-00	CARBON 1M 5% 1/4W
L452	1-424-397-11	(West Germany)...COIL, CHOKE 200UH	R103	1-246-545-00	CARBON 1M 5% 1/4W
L601	1-410-324-11	INDUCTOR 4.7UH	R104	1-246-545-00	CARBON 1M 5% 1/4W
L602	1-410-324-11	INDUCTOR 4.7UH	R105	1-247-713-11	CARBON 1K 5% 1/4W
L603	1-410-324-11	INDUCTOR 4.7UH	R106	1-249-417-11	CARBON 1K 5% 1/4W
L604	1-410-324-11	INDUCTOR 4.7UH	R111	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
L605	1-410-509-11	INDUCTOR 10UH	R112	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
L606	1-460-042-11	COIL (WITH CORE)	R113	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
L607	1-460-042-11	COIL (WITH CORE)	R114	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
L608	1-408-096-00	INDUCTOR 470UH	R151	1-246-545-00	CARBON 1M 5% 1/4W
L610	1-410-324-11	INDUCTOR 4.7UH	R152	1-246-545-00	CARBON 1M 5% 1/4W
L611	1-410-396-41	FERRITE BEAD INDUCTOR	R153	1-246-545-00	CARBON 1M 5% 1/4W
L612	1-410-396-41	FERRITE BEAD INDUCTOR	R154	1-246-545-00	CARBON 1M 5% 1/4W
L801	1-410-324-11	INDUCTOR 4.7UH	R155	1-247-713-11	CARBON 1K 5% 1/4W
L802	1-410-324-11	INDUCTOR 4.7UH	R156	1-249-417-11	CARBON 1K 5% 1/4W
Q201	8-729-140-96	TRANSISTOR 2SD774-34	R161	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
Q202	8-729-194-57	TRANSISTOR 2SC945-P	R162	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
Q203	8-729-141-03	TRANSISTOR 2SA733-QP	R163	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
Q204	8-729-141-03	TRANSISTOR 2SA733-QP	R164	1-249-417-11	(West Germany)...CARBON 1K 5% 1/4W
Q205	8-729-141-26	TRANSISTOR 2SC3622A-LK	R202	1-247-700-11	CARBON 100 5% 1/4W
Q255	8-729-141-26	TRANSISTOR 2SC3622A-LK	R203	1-247-132-00	CARBON 1.1K 5% 1/4W
Q301	8-729-203-45	TRANSISTOR 2SC3423-0	R204	1-247-718-11	CARBON 2.7K 5% 1/4W
Q302	8-729-107-53	TRANSISTOR 2SC2275A	R205	1-249-753-15	CARBON 4.7M 5% 1/4W
Q303	8-729-190-53	TRANSISTOR 2SA985A	R206	1-249-753-15	CARBON 4.7M 5% 1/4W
Q304	8-729-300-11	TRANSISTOR 2SC2922-0	R208	1-247-162-00	CARBON 20K 5% 1/4W
Q305	8-729-300-10	TRANSISTOR 2SA1216-0			
Q306	8-729-108-14	TRANSISTOR 2SA988-F			

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R209	1-247-718-11	CARBON	2.7K	5%	1/4W	R327	1-247-713-11	(EXCEPT West Germany)			
R212	1-249-465-11	CARBON	47K	5%	1/4W		...CARBON	1K	5%	1/4W	
R213	1-247-152-00	CARBON	8.2K	5%	1/4W	R327	1-247-717-11	(West Germany) ...CARBON	2.2K	5%	1/4W
R214	1-247-693-11	CARBON	27	5%	1/4W	R351	1-247-713-11	CARBON	1K	5%	1/4W
R215	1-247-754-11	CARBON	1.5K	5%	1/2W	R352	1-249-469-11	CARBON	100K	5%	1/4W
R216	1-247-754-11	CARBON	1.5K	5%	1/2W	R353	1-249-668-11	CARBON	620	5%	1/2W
R217	1-247-750-11	CARBON	680	5%	1/2W	R354 Δ .1-249-417-11	CARBON	1K	5%	1/4W F	
R218	1-249-462-11	CARBON	22K	5%	1/4W	R355 Δ .1-212-895-00	FUSIBLE	390	5%	1/4W F	
R219	1-249-465-11	CARBON	47K	5%	1/4W	R356 Δ .1-212-990-00	FUSIBLE	220	5%	1/2W F	
R220	1-247-749-11	CARBON	560	5%	1/2W	R357 Δ .1-212-950-00	FUSIBLE	4.7	5%	1/2W F	
R221	1-247-717-11	CARBON	2.2K	5%	1/4W	R358 Δ .1-212-950-00	FUSIBLE	4.7	5%	1/2W F	
R222	1-247-725-11	CARBON	10K	5%	1/4W	R359 1-217-611-00	RES, METAL PLATE 0.1				
R223	1-249-465-11	CARBON	47K	5%	1/4W	R360 1-217-611-00	RES, METAL PLATE 0.1				
R224	1-247-721-11	CARBON	4.7K	5%	1/4W	R361 Δ .1-247-717-11	CARBON	2.2K	5%	1/4W F	
R225 Δ .1-247-743-11	CARBON	220	5%	1/2W F	R362 1-249-460-11	CARBON	15K	5%	1/4W		
R226 Δ .1-215-892-11	METAL OXIDE	1K	5%	2W F	R363 Δ .1-212-962-00	FUSIBLE	15	5%	1/2W F		
R227 Δ .1-215-892-11	METAL OXIDE	1K	5%	2W F	R364 Δ .1-212-962-00	FUSIBLE	15	5%	1/2W F		
R229 1-247-721-11	CARBON	4.7K	5%	1/4W	R365 1-247-891-00	CARBON	330K	5%	1/4W		
R230	1-247-118-00	CARBON	300	5%	1/4W	R374 1-247-727-11	CARBON	10	5%	1/2W	
R231	1-247-702-11	CARBON	150	5%	1/4W	R375 Δ .1-212-998-00	FUSIBLE	470	5%	1/2W F	
R233	1-247-713-11	CARBON	1K	5%	1/4W	R376 1-249-721-11	CARBON	100K	5%	1/2W	
R252	1-247-700-11	CARBON	100	5%	1/4W	R377 1-247-713-11	(EXCEPT West Germany)				
R253	1-247-132-00	CARBON	1.1K	5%	1/4W		...CARBON	1K	5%	1/4W	
R254	1-247-718-11	CARBON	2.7K	5%	1/4W	R377 1-247-717-11	(West Germany) ...CARBON	2.2K	5%	1/4W	
R255	1-249-753-15	CARBON	4.7M	5%	1/4W	R401 Δ .1-216-459-00	METAL OXIDE	2.7K	5%	2W F	
R256	1-249-753-15	CARBON	4.7M	5%	1/4W	R402 Δ .1-216-459-00	METAL OXIDE	2.7K	5%	2W F	
R258	1-247-162-00	CARBON	20K	5%	1/4W	R405 1-247-706-11	(EXCEPT West Germany)				
R259	1-247-718-11	CARBON	2.7K	5%	1/4W		...CARBON	330	5%	1/4W	
R262	1-249-465-11	CARBON	47K	5%	1/4W	R406 1-249-469-11	CARBON	100K	5%	1/4W	
R263	1-247-152-00	CARBON	8.2K	5%	1/4W	R407 1-247-700-11	CARBON	100	5%	1/4W	
R279	1-247-721-11	CARBON	4.7K	5%	1/4W	R408 1-249-469-11	CARBON	100K	5%	1/4W	
R283	1-247-713-11	CARBON	1K	5%	1/4W	R409 1-247-710-11	CARBON	560	5%	1/4W	
R301	1-247-713-11	CARBON	1K	5%	1/4W	R410 1-247-710-11	CARBON	560	5%	1/4W	
R302	1-249-469-11	CARBON	100K	5%	1/4W	R411 1-247-725-11	CARBON	10K	5%	1/4W	
R303	1-249-668-11	CARBON	620	5%	1/2W	R412 1-249-484-11	CARBON	6.8	5%	1/2W	
R304 Δ .1-249-417-11	CARBON	1K	5%	1/4W F	R413 1-247-739-11	CARBON	100	5%	1/2W		
R305 Δ .1-212-895-00	FUSIBLE	390	5%	1/4W F	R414 1-247-138-00	CARBON	2K	5%	1/4W		
R306 Δ .1-212-990-00	FUSIBLE	220	5%	1/2W F	R415 1-249-542-11	CARBON	390	5%	1/4W		
R307 Δ .1-212-950-00	FUSIBLE	4.7	5%	1/2W F	R416 1-214-937-00	CARBON	1M	5%	1/2W		
R308 Δ .1-212-950-00	FUSIBLE	4.7	5%	1/2W F	R417 1-249-844-11	CARBON	56K	5%	1/2W		
R309 1-217-611-00	RES, METAL PLATE 0.1				R418 1-249-818-11	CARBON	4.7K	1%	1/2W		
R310 1-217-611-00	RES, METAL PLATE 0.1				R419 1-247-713-11	CARBON	1K	5%	1/4W		
R311 Δ .1-247-717-11	CARBON	2.2K	5%	1/4W F	R431 1-259-428-11	(West Germany) ...CARBON	1K	5%	1/6W		
R312 1-249-460-11	CARBON	15K	5%	1/4W	R432 1-259-428-11	(West Germany) ...CARBON	1K	5%	1/6W		
R313 Δ .1-212-962-00	FUSIBLE	15	5%	1/2W F	R455 1-247-706-11	(EXCEPT West Germany)					
R314 Δ .1-212-962-00	FUSIBLE	15	5%	1/2W F		...CARBON	330	5%	1/4W		
R315 1-247-891-00	CARBON	330K	5%	1/4W	R456 1-249-469-11	CARBON	100K	5%	1/4W		
R316 1-247-725-11	CARBON	10K	5%	1/4W	R457 1-247-700-11	CARBON	100	5%	1/4W		
R317 1-247-887-00	CARBON	220K	5%	1/4W	R458 1-249-469-11	CARBON	100K	5%	1/4W		
R318 1-247-881-00	CARBON	120K	5%	1/4W	R459 1-247-710-11	CARBON	560	5%	1/4W		
R319 Δ .1-249-432-11	CARBON	18K	5%	1/4W F	R460 1-247-710-11	CARBON	560	5%	1/4W		
R320 1-247-721-11	CARBON	4.7K	5%	1/4W	R461 1-247-725-11	CARBON	10K	5%	1/4W		
R321 1-249-467-11	CARBON	68K	5%	1/4W	R462 1-249-484-11	CARBON	6.8	5%	1/2W		
R323 Δ .1-212-849-00	FUSIBLE	4.7	5%	1/4W F	R463 1-247-739-11	CARBON	100	5%	1/2W		
R324 1-247-727-11	CARBON	10	5%	1/2W	R465 1-249-542-11	CARBON	390	5%	1/4W		
R325 Δ .1-212-998-00	FUSIBLE	470	5%	1/2W F	R466 1-214-937-00	CARBON	1M	5%	1/2W		
R326 1-249-721-11	CARBON	100K	5%	1/2W	R467 1-249-844-11	CARBON	56K	5%	1/2W		
					R468 1-249-818-11	CARBON	4.7K	1%	1/2W		

Note:
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Note:
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Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
R469	1-247-713-11	CARBON	1K	5%	1/4W		R647	1-259-440-11	CARBON	3.3K	5%	1/6W	
R481	1-259-428-11	(West Germany)...CARBON	1K	5%	1/6W		R648	1-259-466-11	CARBON	39K	5%	1/6W	
R482	1-259-428-11	(West Germany)...CARBON	1K	5%	1/6W		R649	1-259-466-11	CARBON	39K	5%	1/6W	
R601	1-259-468-11	CARBON	47K	5%	1/6W		R701	1-259-451-11	CARBON	9.1K	5%	1/6W	
R602	1-259-452-11	CARBON	10K	5%	1/6W		R702	1-259-451-11	CARBON	9.1K	5%	1/6W	
R603	1-259-452-11	CARBON	10K	5%	1/6W		R703	1-259-436-11	CARBON	2.2K	5%	1/6W	
R604	1-259-460-11	CARBON	22K	5%	1/6W		R704	1-259-436-11	CARBON	2.2K	5%	1/6W	
R605	1-259-468-11	CARBON	47K	5%	1/6W		R705	1-259-458-11	CARBON	18K	5%	1/6W	
R606	1-259-452-11	CARBON	10K	5%	1/6W		R706	1-259-440-11	CARBON	3.3K	5%	1/6W	
R607	1-259-460-11	CARBON	22K	5%	1/6W		R707	1-259-416-11	CARBON	330	5%	1/6W	
R608	1-259-492-11	CARBON	470K	5%	1/6W		R708	1-259-432-11	CARBON	1.5K	5%	1/6W	
R609	1-259-452-11	CARBON	10K	5%	1/6W		R709	1-259-432-11	CARBON	1.5K	5%	1/6W	
R610	1-259-420-11	CARBON	470	5%	1/6W		R710	1-259-488-11	CARBON	330K	5%	1/6W	
R611	1-259-420-11	CARBON	470	5%	1/6W		R711	1-259-404-11	CARBON	100	5%	1/6W	
R612	1-259-420-11	CARBON	470	5%	1/6W		R712	1-259-458-11	CARBON	18K	5%	1/6W	
R613	1-259-404-11	CARBON	100	5%	1/6W		R713	1-259-404-11	CARBON	100	5%	1/6W	
R614	1-259-459-11	CARBON	20K	5%	1/6W		R714	1-259-440-11	CARBON	3.3K	5%	1/6W	
R615	1-259-428-11	CARBON	1K	5%	1/6W		R715	1-249-391-11	CARBON	6.8	5%	1/4W	
R616	1-259-436-11	CARBON	2.2K	5%	1/6W		R751	1-259-451-11	CARBON	9.1K	5%	1/6W	
R617	1-259-404-11	CARBON	100	5%	1/6W		R752	1-259-451-11	CARBON	9.1K	5%	1/6W	
R618	1-259-452-11	CARBON	10K	5%	1/6W		R753	1-259-436-11	CARBON	2.2K	5%	1/6W	
R619	1-259-428-11	CARBON	1K	5%	1/6W		R754	1-259-436-11	CARBON	2.2K	5%	1/6W	
R620	1-259-416-11	CARBON	330	5%	1/6W		R755	1-259-458-11	CARBON	18K	5%	1/6W	
R621	1-259-416-11	CARBON	330	5%	1/6W		R756	1-259-440-11	CARBON	3.3K	5%	1/6W	
R622	1-259-420-11	CARBON	470	5%	1/6W		R757	1-259-416-11	CARBON	330	5%	1/6W	
R623	1-259-416-11	CARBON	330	5%	1/6W		R758	1-259-432-11	CARBON	1.5K	5%	1/6W	
R624	1-259-380-11	CARBON	10	5%	1/6W		R759	1-259-432-11	CARBON	1.5K	5%	1/6W	
R626	1-259-452-11	CARBON	10K	5%	1/6W		R760	1-259-488-11	CARBON	330K	5%	1/6W	
R627	1-259-444-11	CARBON	4.7K	5%	1/6W		R761	1-259-404-11	CARBON	100	5%	1/6W	
R628	1-259-444-11	CARBON	4.7K	5%	1/6W		R762	1-259-458-11	CARBON	18K	5%	1/6W	
R629	1-259-456-11	CARBON	15K	5%	1/6W		R763	1-259-404-11	CARBON	100	5%	1/6W	
R630	1-259-428-11	CARBON	1K	5%	1/6W		R764	1-259-440-11	CARBON	3.3K	5%	1/6W	
R631	1-259-428-11	CARBON	1K	5%	1/6W		R765	1-249-391-11	CARBON	6.8	5%	1/4W	
R632	1-259-428-11	CARBON	1K	5%	1/6W		R801	1-259-424-11	CARBON	680	5%	1/6W	
R633	1-259-500-11	CARBON	1M	5%	1/6W		R802	1-259-401-11	CARBON	75	5%	1/6W	
R634	1-259-440-11	CARBON	3.3K	5%	1/6W		R803	1-259-428-11	CARBON	1K	5%	1/6W	
R635	1-259-392-11	CARBON	33	5%	1/6W		R804	1-259-424-11	CARBON	680	5%	1/6W	
R636	1-259-468-11	CARBON	47K	5%	1/6W		R805	1-259-424-11	CARBON	680	5%	1/6W	
R637	1-259-406-11	CARBON	120	5%	1/6W		R806	1-259-428-11	CARBON	1K	5%	1/6W	
R638	1-259-420-11	CARBON	470	5%	1/6W		R807	1-259-428-11	CARBON	1K	5%	1/6W	
R639	1-259-500-11	CARBON	1M	5%	1/6W		R808	1-259-500-11	CARBON	1M	5%	1/6W	
R640	1-259-416-11	CARBON	330	5%	1/6W		R809	1-259-428-11	CARBON	1K	5%	1/6W	
R641	1-259-416-11	CARBON	330	5%	1/6W		R902	1-247-727-11	(West Germany)...CARBON	10	5%	1/2W	
R643	1-259-436-11	CARBON	2.2K	5%	1/6W		R903	1-247-727-11	(West Germany)...CARBON	10	5%	1/2W	
R646	1-259-440-11	CARBON	3.3K	5%	1/6W		R952	1-247-727-11	(West Germany)...CARBON	10	5%	1/2W	
							R953	1-247-727-11	(West Germany)...CARBON	10	5%	1/2W	

Ref.No.	Part No.	Description
RT301	1-237-455-11	RES, ADJ, CARBON 500 (BIAS L)
RT351	1-237-455-11	RES, ADJ, CARBON 500 (BIAS R)
RV101	1-241-162-11	RES, VAR, CARBON 250K/250K (BALANCE)
RV102	1-241-163-11	RES, VAR, CARBON 125K (TREBLE)
RV103	1-241-164-11	RES, VAR, CARBON 260K (BASS)
RV104	1-241-165-11	RES, VAR, CARBON 40K/40K (ATTENUATOR)
RY301	1-515-676-11	RELAY
RY302	1-515-676-11	RELAY
S201	1-571-824-11	SWITCH, ROTARY (ANALOG-INPUT SELECTOR)
S202	1-571-821-11	SWITCH, ROTARY SLIDE (DIGITAL-INPUT SELECTOR)
S203	1-571-823-11	SWITCH, ROTARY SLIDE (REC OUT SELECTOR)
S204	1-571-828-11	SWITCH, PUSH (1 KEY)(SOURCE DIRECT)
S205	1-572-417-11	SWITCH, PUSH (2 KEY)(MUTING/SUBSONIC)
S206	1-571-822-11	SWITCH, ROTARY SLIDE (SPEAKERS)
S207	1-571-825-11	SWITCH, ROTARY (MODE)
S401	1-571-111-11	SWITCH, PUSH (1 KEY)(CARTRIDGE)
S501	Δ.1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
SCN7	*1-564-505-11	(West Germany)...PLUG, CONNECTOR 2P
T1	Δ.1-450-257-11	(Canadian).....TRANSFORMER, POWER
T1	Δ.1-450-258-11	(AE1, West Germany)...TRANSFORMER, POWER
T1	Δ.1-450-259-11	(AE2).....TRANSFORMER, POWER
T1	Δ.1-450-260-11	(UK).....TRANSFORMER, POWER
TM901	1-537-227-11	(AE2).....TERMINAL BOARD (SP)
TM901	1-537-228-11	(West Germany).....TERMINAL BOARD (SP)
TM901	1-537-235-11	(Canadian,AE1,UK)....TERMINAL BOARD (SP)
TP301	1-535-139-00	BASE POST 14MM (10MM PITCH) 2P
TP351	1-535-139-00	BASE POST 14MM (10MM PITCH) 2P
VH1	*1-564-104-00	PIN, CONNECTOR 3P
VH4	*1-564-321-00	(EXCEPT Canadian)...PIN, CONNECTOR 2P
VH5	*1-565-792-11	PIN, CONNECTOR 2P
VH6	*1-564-321-21	(EXCEPT Canadian)...PIN, CONNECTOR 2P
VH8	*1-564-241-00	PIN, CONNECTOR 4P
VH9	*1-564-321-11	(Canadian)...PIN, CONNECTOR 2P
VH10	*1-565-792-11	(Canadian)...PIN, CONNECTOR 2P
VH11	*1-564-321-11	(Canadian)...PIN, CONNECTOR 2P
VH12	1-564-320-00	PIN, CONNECTOR 2P
VH15	*1-565-792-11	PIN, CONNECTOR 2P
X601	1-577-269-11	VIBRATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

3-752-025-11 (Canadian,AE1,UK)....MANUAL, INSTRUCTION
(ENGLISH, FRENCH, SPANISH, PORTUGUESE)
3-752-025-41 (AEP,West Germany)...MANUAL, INSTRUCTION
(GERMAN, DUTCH, SWEDISH, ITALIAN)

*4-929-219-01 CUSHION
*4-941-755-01 INDIVIDUAL CARTON

Note:	Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.